

DEP Draft Proposal to Replace “Peak Flow” standard in Stormwater Rules

3. Stormwater quantity standards

A. Stream protection and flooding standards. *[this replaces the current standard in Ch. 500(3)(A) entitled "Peak flow from the site and peak flow of the receiving waters"]*

The applicant for a stormwater permit or a site location of development permit must meet the stream protection standard and stream flooding standard as described in this section.

(1) What standard to meet

- (a) If the project includes less than 3 acres of impervious apply the 12-hour stream protection standard.
- (b) If the project includes 3 acres or more of impervious area and located in the direct watershed of a waterbody that is not most at risk, meet the 12-hour stream protection standard and the flooding standard.
- (c) If the project includes 3 acres or more of impervious area in the direct watershed of a most at risk waterbody, meet the 24-hour stream protection standard and the flooding standard.

(2) Stream protection standard

- (a) 24-hour stream protection standard -- A stormwater management system must detain, retain, or result in the infiltration of stormwater from the one-year, 24-hour, storm so that the extended detention time of runoff entering the system is at least 24 hours.
- (b) 12-hour stream protection standard -- A stormwater management system must detain, retain, or result in the infiltration of stormwater from the one-year, 24-hour, storm so that the extended detention time of runoff entering the system is at least 12 hours.

Extended detention must be calculated using either the center of mass method or plug-flow method. For the center of mass method, twenty-four hour extended detention requires the time difference between the center of mass of the pond's inflow hydrograph and center of mass of the pond's outflow hydrograph to be at least 12 hours (or 24 hours). For the plug-flow method, twenty-four hour extended detention requires the average of the storage times in the pond for equi-volume plugs of runoff composing the pond's inflow hydrograph to be at least 12 hours (or 24 hours) on a first-plug-in-first-plug-out basis. In both cases, the pond's outlet should be designed to produce an evenly distributed discharge rate over the 12 hours (or 24 hours). In this paragraph, use "12 hours" or "24 hours" consistent with the 12-hour or 24-hour stream protection standard.

(3) Stream flooding standard.

A stormwater management system must detain, retain, or result in infiltration of the 25-year, 24-hour storm, so that the peak flow of stormwater from the site does not exceed the peak flow of stormwater prior to the undertaking of the project. In municipalities with designated

100-year flood elevations, the site runoff may not adversely affect the designated 100-year flood elevations.

- (4) Discharge to the ocean, a great pond, or a major river segment.

If the applicant demonstrates that the project conveys stormwater exclusively in sheetflow or in a manmade open drainage or piped system directly into the ocean, into a great pond, or into the main stem of a river or portion of a major river segment as defined in Section 2(I) (page 2), then the standards in (2) and (3) do not have to be met unless:

- (a) The stormwater enters a river or portion of a river within two miles upstream from the point of any public water supply intake; or
- (b) The department determines that there an unreasonable impact on a river or portion of a river may result. The department may request additional information necessary to make this determination. The department may require that steps be taken to avoid the unreasonable impact, which may include meeting the standards in (1) or (2) or something less.

- (5) Insignificant increase.

The department may allow an insignificant increase in the peak flow from the site or in the peak flow of the receiving waters, if the department determines that the increase cannot be avoided by reasonable changes in project design or density, such as changes in flow routing or build-out location. The increase may not unreasonably increase the extent, frequency, or duration of flooding at any downstream control structures, including but not limited to culverts, bridges, crossings, and dams, or have an unreasonable adverse affect on protected natural resources. In making its determination, the department shall consider cumulative impacts. If additional information is required to make a determination concerning increased flow, the department may only consider an increase after the applicant agrees, pursuant to 38 M.R.S.A. § 344-B(3)(B), that the review period may be extended as determined to be necessary by the department.